

WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTER
PATENT OF THE UNITED STATES IS:

1. A gateway apparatus connected to a telephone
5 network and the Internet, comprising:
- a facsimile communications mechanism configured to
receive facsimile communications protocols and facsimile
information from a calling facsimile apparatus coupled to
said telephone network through said telephone network;
- 10 an Internet communications mechanism configured to
transmit said facsimile information in a packet format to a
called facsimile apparatus coupled to said telephone network
via a different gateway apparatus through the Internet and
the telephone network;
- 15 a memory storing data representing a calling facsimile
number of said calling facsimile apparatus in association
with a called facsimile number of said called facsimile
apparatus; and
- a communications controller configured to determine
20 before establishing a line connection with said calling
facsimile apparatus whether said facsimile number of said
calling facsimile apparatus is registered in said memory as
the calling facsimile number, to cause said different gateway
apparatus to initiate a call to said called facsimile
25 apparatus using said called facsimile number when said

facsimile number of said calling facsimile apparatus is determined as registered in said memory as the calling facsimile number, and to establish a line connection upon a receipt of an acknowledgement indicating the line is
5 connectable from said called facsimile apparatus.

2. A gateway apparatus as defined in Claim 1, wherein said data stored in said memory represents said calling facsimile number of said calling facsimile apparatus
10 in association with a plurality of called facsimile numbers including the facsimile number of said called facsimile apparatus, each of said facsimile numbers being previously designated with a time parameter, and said communications controller selects facsimile numbers from among said
15 plurality of said called facsimile numbers based on said time parameter and additional time information corresponding to said time parameter so as to cause said different gateway apparatus to initiate a call to facsimile apparatuses using said selected facsimile numbers.

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3. A gateway apparatus as defined in Claim 2, wherein said time parameter includes arbitrary transmission start and arbitrary transmission completion times and said additional time information includes a call acceptance time.

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4. A gateway apparatus as defined in Claim 1,
wherein said communications controller performs a new
registration and changes the contents of registration in said
memory in accordance with an instruction from said calling
5 facsimile apparatus.

5. A gateway apparatus as defined in Claim 1,
wherein said facsimile communications protocols includes G3
facsimile protocols.

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6. A gateway apparatus as defined in Claim 1,
wherein said packet format includes a TCP/IP packet format.

7. A gateway apparatus connected to a telephone
15 network and the Internet, comprising:

facsimile communications means for receiving facsimile
communications protocols and facsimile information from a
calling facsimile apparatus coupled to said telephone network
through said telephone network;

20 Internet communications means for transmitting said
facsimile information in a packet format to a called
facsimile apparatus coupled to said telephone network via a
different gateway apparatus through the Internet and the
telephone network;

25 storing means for storing data representing a calling

facsimile number of said calling facsimile apparatus in association with a called facsimile number of said called facsimile apparatus; and

communications controlling means for determining before
5 establishing a line connection with said calling facsimile apparatus whether said facsimile number of said calling facsimile apparatus is registered in said storing means as the calling facsimile number, causing said different gateway apparatus to initiate a call to said called facsimile
10 apparatus using said called facsimile number when said facsimile number of said calling facsimile apparatus is determined as registered in said storing means as the calling facsimile number, and establishing a line connection upon a receipt of an acknowledgement indicating the line is
15 connectable from said called facsimile apparatus.

8. A gateway apparatus as defined in Claim 7, wherein said data stored in said storing means represents said calling facsimile number of said calling facsimile
20 apparatus in association with a plurality of called facsimile numbers including the facsimile number of said called facsimile apparatus, each of said facsimile numbers being previously designated with a time parameter, and said communications controlling means selects facsimile numbers
25 from among said plurality of said called facsimile numbers

based on said time parameter and additional time information corresponding to said time parameter so as to cause said different gateway apparatus to initiate a call to facsimile apparatuses using said selected facsimile numbers.

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9. A gateway apparatus as defined in Claim 8, wherein said time parameter includes arbitrary transmission start and arbitrary transmission completion times and said additional time information includes a call acceptance time.

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10. A gateway apparatus as defined in Claim 7, wherein said communications controlling means performs a new registration and changes the contents of registration in said storing means in accordance with an instruction from said calling facsimile apparatus.

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11. A gateway apparatus as defined in Claim 7, wherein said facsimile communications protocols includes G3 facsimile protocols.

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12. A gateway apparatus as defined in Claim 7, wherein said packet format includes a TCP/IP packet format.

13. A method of transmitting facsimile information from a calling facsimile apparatus to a called facsimile

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apparatus through the Internet using a packet format,
comprising the steps of:

storing data representing a calling facsimile number of
a calling facsimile apparatus in association with a called
5 facsimile number of a called facsimile apparatus;

receiving a call from said calling facsimile apparatus,
said call including facsimile communications protocols;

determining before establishing a line connection with
said calling facsimile apparatus whether said facsimile
10 number of said calling facsimile apparatus is registered as
the calling facsimile number in said storing step;

initiating a call to said called facsimile apparatus
using said called facsimile number when said facsimile number
of said calling facsimile apparatus is determined as
15 registered in said storing step as the calling facsimile
number; and

establishing a line connection upon a receipt of an
acknowledgement indicating the line is connectable from said
called facsimile apparatus.

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14. A method as defined in Claim 13, wherein said
data stored in said storing step represents said calling
facsimile number of said calling facsimile apparatus in
association with a plurality of called facsimile numbers
25 including the facsimile number of said called facsimile

apparatus, each of said facsimile numbers being previously designated with a time parameter,

said method further comprises a selecting step for selecting facsimile numbers from among said plurality of said
5 called facsimile numbers based on said time parameter and additional time information corresponding to said time parameter so as to initiate a call to facsimile apparatuses using said selected facsimile numbers.

10 15. A method as defined in Claim 14, wherein said time parameter includes arbitrary transmission start and arbitrary transmission completion times and said additional time information includes a call acceptance time.

15 16. A method as defined in Claim 13, wherein said storing step is performed in accordance with an instruction from said calling facsimile apparatus.

20 17. A method as defined in Claim 13, wherein said facsimile communications protocols includes G3 facsimile protocols.

25 18. A method as defined in Claim 13, wherein said packet format includes a TCP/IP packet format.

19. An Internet facsimile system, comprising:
a gateway apparatus connected to a telephone network
and the Internet, said gateway apparatus comprising:
a facsimile communications mechanism configured to
5 receive facsimile communications protocols and facsimile
information from a calling facsimile apparatus coupled to
said telephone network through said telephone network;
an Internet communications mechanism configured to
transmit said facsimile information in a packet format to a
10 called facsimile apparatus coupled to said telephone network
via a different gateway apparatus through the Internet and
the telephone network;
a memory storing data representing a calling facsimile
number of said calling facsimile apparatus in association
15 with a called facsimile number of said called facsimile
apparatus; and
a communications controller configured to determine
before establishing a line connection with said calling
facsimile apparatus whether said facsimile number of said
20 calling facsimile apparatus is registered in said memory as
the calling facsimile number, to cause said different gateway
apparatus to initiate a call to said called facsimile
apparatus using said called facsimile number when said
facsimile number of said calling facsimile apparatus is
25 determined as registered in said memory as the calling

facsimile number, and to establish a line connection upon a receipt of an acknowledgement indicating the line is connectable from said called facsimile apparatus.

5 20. A system as defined in Claim 19, wherein said data stored in said memory represents said calling facsimile number of said calling facsimile apparatus in association with a plurality of called facsimile numbers including the facsimile number of said called facsimile apparatus, each of
10 said facsimile numbers being previously designated with a time parameter, and said communications controller selects facsimile numbers from among said plurality of said called facsimile numbers based on said time parameter and additional time information corresponding to said time parameter so as
15 to cause said different gateway apparatus to initiate a call to facsimile apparatuses using said selected facsimile numbers.

21. A system as defined in Claim 20, wherein said
20 time parameter includes arbitrary transmission start and arbitrary transmission completion times and said additional time information includes a call acceptance time.

22. A system as defined in Claim 19, wherein said
25 communications controller performs a new registration and

changes the contents of registration in said memory in accordance with an instruction from said calling facsimile apparatus.

5 23. A system as defined in Claim 19, wherein said facsimile communications protocols includes G3 facsimile protocols.

10 24. A system as defined in Claim 19, wherein said packet format includes a TCP/IP packet format.

15 25. A computer readable medium storing computer instructions for performing the steps recited in anyone of Claims 13 - 18.